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50. The method of claim 48, wherein the DNA molecule is formed by synthesizing a DNA molecule encoding the amino acid sequence of the variant, which has an altered amino acid sequence of one or more epitopes of the reference protein.

51. The method of claim 48, wherein the reference protein is an industrial enzyme.

52. The method of claim 51, wherein the enzyme is a detergent enzyme.

53. The method of claim 52, wherein the detergent enzyme is an amylase, cellulase, lipase, oxidase, or protease.

54. The method of claim 48, wherein the reference protein is a process enzyme.

55. The method of claim 54, wherein the process enzyme is an amylase, cellulase, lipase, or lyase.

56. The method of claim 48, wherein the reference protein is a medicinal protein.

57. The method of claim 56, wherein the medicinal protein is a hormone or medicinal enzyme.

58. A method for producing a host cell that is capable of producing a variant of a reference protein having a known amino acid sequence, comprising

(a) mapping one or more epitopes of the reference protein with immunological and proteochemical techniques;

(b) forming a DNA molecule encoding the amino acid sequence of the variant, which has an altered amino acid sequence of one or more epitopes of the reference protein, wherein the variant evokes a lower immunogenic response in an animal than the reference protein;

(c) inserting the DNA molecule encoding the variant into a vector suitable for introduction into a cell; and

(d) introducing the vector into the cell to form the host cell.

59. A method for producing a variant of a reference protein having a known amino acid sequence, comprising

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(a) mapping one or more epitopes of the reference protein with immunological and proteochemical techniques;

(b) forming a DNA molecule encoding the amino acid sequence of the variant, which has an altered amino acid sequence of one or more epitopes of the reference protein, wherein the variant evokes a lower immunogenic response in an animal than the reference protein;

(c) inserting the DNA molecule encoding the variant into a vector suitable for introduction into a cell;

(d) inserting the vector into the cell to form the host cell;

(e) cultivating the host cell under conditions suitable for expressing the variant; and

(f) recovering the variant.

60. The method of claim 59, wherein the reference protein is an industrial enzyme.

61. The method of claim 60, wherein the enzyme is a detergent enzyme.

62. The method of claim 61, wherein the detergent enzyme is an amylase, cellulase, lipase, oxidase, or protease.

63. The method of claim 59, wherein the reference protein is a process enzyme.

64. The method of claim 63, wherein the process enzyme is an amylase, cellulase, lipase, or lyase.

65. The method of claim 59, wherein the reference protein is a medicinal protein.

66. The method of claim 65, wherein the medicinal protein is a hormone or medicinal enzyme.

Concluded